

REMARKS

Claims 1-20 are pending in this application. Claims 1, 7, 11, 14, and 15 have been amended. Claims 19 and 20 are new.

I. OBJECTION TO THE DRAWINGS

In paragraph 1 of the Office Action, the Examiner objects to the drawings in that they do not indicate the elements to the extent that the drawings are clearly understandable. On October 7, 2005, Examiner Grant and attorney, Norman Hainer of Pepper Hamilton LLP, discussed this objection, and an agreement was reached that the drawings do indicate the elements to the extent that the drawings are clearly understandable. Therefore, it is respectfully requested that the Examiner withdraw this objection.

II. OBJECTION TO THE SPECIFICATION

In paragraph 2 of the Office Action, the Examiner objects to the specification in that on page 1, line 20, the statement "U.S. Patent No. 4,474,154 describes a sawing machine" is incorrect. The Examiner states that U.S. Patent No. 4,474,154 describes an "Idling Speed Control for an Internal Combustion Engine". Applicants have deleted the paragraph starting at line 20 on page 1. Thus, applicants respectfully request that the Examiner's objection be withdrawn.

III. REJECTION OF CLAIMS 14-18 UNDER 35 U.S.C. § 112

In paragraph 4 of the Office Action, claims 14-18 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Specifically, the Examiner argues that claims 14 and 15 provide for the use of saw blades to cut granite blocks, but since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicants are intending to encompass. Applicants have amended claims 14 and 15 to clarify that certain steps that were set forth in the preamble of each claim are part of the claimed process of each claim.

Therefore, it is respectfully requested that claims 14 and 15 are in condition for allowance and claims 16-18, which depend from claim 15, are also in condition for allowance. This amendment does not narrow or add new limitations to the claim and is not intended to limit any scope of equivalents.

IV. REJECTION OF CLAIMS 14-15 UNDER 35 U.S.C. § 101

In paragraph 5 of the Office Action, claims 14-15 are rejected under 35 U.S.C. §101. The Examiner argues that the claims recite a use without setting forth any steps involved in the method/process, therefore it is unclear what method/process applicants are intending to encompass. As noted above, applicants have amended claims 14 and 15 to clarify certain steps involved in the claimed method. Therefore, it is respectfully requested that claims 14 and 15 are now in condition for allowance.

V. REJECTION OF CLAIM 1 UNDER 35 U.S.C. § 102(b)

In paragraph 7 of the Office Action, claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by European Patent No. 1038647A1 to *Ludomatica et al.* The Examiner argues that *Ludomatica* discloses a blade having a blade length with two ends and a center, a plurality of cutting segments mounted thereon, the cutting segments being spaced apart from one another from a center to center distance, each of the cutting segments comprising a continuous phase impregnated with superabrasive material selected from one of natural diamond, synthetic diamond, cubic boron nitride, and combinations thereof and wherein there is implicitly a spacing variation of at least 1 millimeter (mm) between a maximum center-to-center distance to the cutting segments.

Applicants respectfully disagree with the Examiner's rejection. Claim 1 of the present application is directed to a device with blades that have a plurality of cutting segments that are spaced apart from one another by a center-to-center distance, wherein there is a spacing variation of at least one 1 mm between a maximum center-to-center distance and a minimum center-to-center

distance of the cutting segments. In the present application, varying the spacing of the diamond segments in the non-uniform manner of claim 1 helps to improve and prolong the saw blade service life. For example, in locations along the length having a propensity for higher wear rates, a greater number of segments per unit length may be mounted. Conversely, in locations along the blade length having a propensity for lower wear rates, a smaller number of segments per unit length may be mounted. Some such embodiments are already included in the dependent claims. (See, e.g., claims 2-5 and 16-17.) Applicants have added claims 19 and 20 to further emphasize the features of this exemplary embodiment.

In contrast, *Ludomatica* neither expressly nor implicitly discloses a blade having diamond and/or cubic boron nitride cutting segments having a spacing variation (i.e., non-uniform spacing). *Ludomatica* discloses segments having varying heights and widths, but not a spacing variation. In fact, *Ludomatica* doesn't even disclose any certain distance for the spacings between the segments. In addition, the *Ludomatica* patent does suggest that configuring the spacing of segments may improve and prolong the saw blade service life. Therefore, a spacing variation of at least 1 mm between a maximum center-to-center distance and a minimum center-to-center distance of the cutting segments is neither explicit nor implicit in *Ludomatica*.

VI. REJECTION OF CLAIMS 2-13 UNDER 35 U.S.C. § 103

The Examiner rejects claims 2-13 under 35 USC §103 as being unpatentable over *Ludomatica* in view of U.S. Patent No. 6,286,498 to *Sung*. The Examiner argues that even though *Ludomatica* does not disclose the specific placement of the particles with respect to the length of the blade (claims 2-4) or size and type (claims 5-13), *Sung* discloses a blade in which the particles are placed at specific locations on the blade so as to optimize the accuracy of the cutting process. The Examiner states that it would have been obvious to have placed the superabrasive elements of

Ludomatica at prescribed locations along the length of the blade as taught by *Sung* so as to optimize the accuracy of the cutting process.

Applicants respectfully disagree. First, with respect to claims 2-6, those claims depend from claim 1. As noted above, *Ludomatica* does not disclose a blade that includes cutting elements having a spacing variation. Like *Ludomatica*, *Sung* does not disclose a blade having cutting segments that have a spacing variation (i.e., are distributed in a non-uniform manner). Rather, the *Sung* patent discloses a superabrasive tool with superabrasive particles distributed in a predetermined or uniform pattern. (See column 8, lines 31-51.) In fact, *Sung* teaches away from non-uniform distribution of cutting segments by stating that a non-uniform pattern is undesirable. (See column 3, line 38-56.) Accordingly, neither *Ludomatica* nor *Sung*, either alone or in combination, teaches the limitations of claims 1-6.

With regard to claims 7-13, claim 7 claims a device with a blade containing a cutting segment having a wear resistance property that differs by at least 10% from the wear resistance property of at least one other cutting segment on the blade. The Examiner does not point to any text of *Sung* or *Ludomatica* that discloses such a device, and Applicants do not find such a feature disclosed in either *Sung* or *Ludomatica*. In fact, *Sung* does not disclose a blade at all. Rather, *Sung* discloses a device having a plurality of layers that are impregnated with superabrasive grits in a brush-like fashion to form a three-dimensional superabrasive device. Because neither *Sung* nor *Ludomatica*, either alone or in combination, discloses a blade or any other device having superabrasive cutting segments with wear resistance properties that differ by at least 10%, applicants request reconsideration of this rejection.

CONCLUSION

Claims 1, 7, 14, and 15 have been amended and claims 19-20 have been added.

Claims 1-20 are pending.

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding objections and rejections. There being no other rejections, applicants respectfully request that the current application be allowed and passed to issue.

If the Examiner believes for any reason that personal communication will expedite prosecution of this application, I invite that the Examiner telephone me directly.

A Revocation and Grant of New Power of Attorney to the undersigned was filed in this application on October 12, 2005.

AUTHORIZATION

A Fee Calculation Sheet and fee for the newly presented independent claim is enclosed. The Commissioner is hereby authorized to charge any additional fees, including any fees for net addition of claims, which may be required for this Amendment, or credit any overpayment to Deposit Account No. 50-0436.

Respectfully submitted,

PEPPER HAMILTON LLP

A handwritten signature in black ink, appearing to read 'JMS', is written over a horizontal line.

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